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Just in time for Halloween: LANL science and the atomic movie genre Lab's legacy weapons test footage used by Hollywood Title:

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Just in time for Halloween: LANL science and the atomic movie genre

Lab's legacy weapons test footage used by Hollywood

By Theresa Berger, archivist, National Security Research Center

Editor's note: This is the first story in a three-part series on the Lab's post-World War II influence on pop culture, which is a reflection of the public's understanding of scientific advancements following the dawn of the Atomic Age in 1945. Each story spotlights the Lab's legacy materials, including film and photos, from the weapons testing era that are now part of the National Security Research Center's collections.

As any movie buff will assure you, there is no denying the role of the Atomic Age in Hollywood. Inspired by Halloween, we thought we would do some (grave) digging into the ways Los Alamos and the Lab have been featured in the horror film genre.



(https://drive.google.com/file/d/1as3pJuo6ZefOqsurMzlsixwVngwC9iPX/view?usp=sharing)

caption: After World War II, the United States entered a period of weapons testing through the 1990s. Tests were documented through film and photography, as seen here during Project Sandstone in 1948. The imagery, which is housed in the Lab's

National Security Research Center (NSRC), has inspired Hollywood filmmakers, but is also part of the collections of legacy materials that are relied upon by today's staff for their national security work.

In a 1991 study of nuclear movies, cultural historian Mick Broderick identified over 800 feature-length films containing nuclear themes, and there have undoubtedly been more since. The universe of nuclear cinema features everything from spy thrillers, disaster films, and superheroes to comedy, satire, and of course, horror. Perhaps more than any other film genre, horror has been used to explore atomic weapons — and Los Alamos and its scientists have been at the forefront of these explorations that began to emerge after World War II ended.

The Lab's first director and the so-called father of the atomic bomb J. Robert Oppenheimer himself called our nuclear future undiscovered country in his 1945 farewell speech, said LANL historian Roger Meade.

"I believe to a greater or lesser sense, postwar motion picture films provided a means for society to explore that country that Oppenheimer spoke of," Meade said. "Movies gave expression to society's collective anxiety, fear and hope in a very uncertain age."

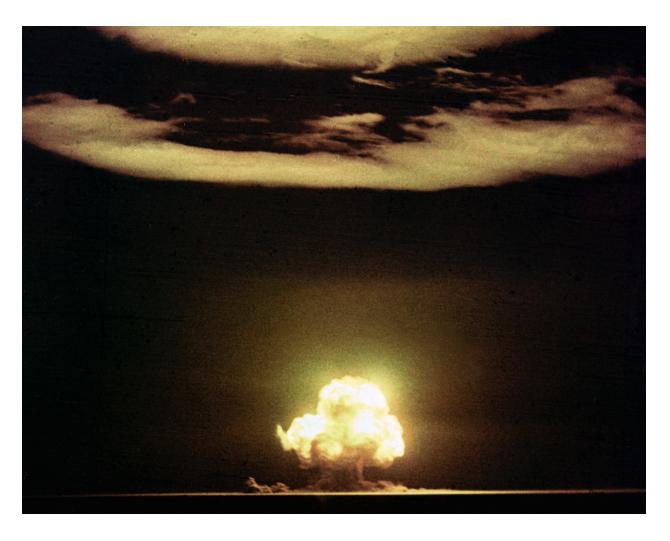
It Came from the Pits!: The Metaphors of Los Alamos

There are hundreds of scary movies and psychotronics, that is, paranormal films, creature features, science fiction films, or thrillers often defined as low-budget or "B" movies, that can trace some of their plot or production to Los Alamos. Examples include

- desert settings, (including filming in New Mexico),
- government scientists as prominent characters,
- plots centered on radiation or nuclear testing, and
- references to the Lab or the Manhattan Project, which was the top-secret creation of the first atomic devices that helped end World War II.

Some notable examples include

 1954's Them!, which features a colony of giant, radioactive ants wreaking havoc on a small town "just outside"
Alamogordo, roughly the same area as the site of the Trinity test.



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caption: In addition to Trinity (above), two other nuclear tests were performed in New Mexico. These were Project Gnome (1961) and Project Gasbuggy (1967). Both were sponsored by Lawrence Livermore National Lab. New Mexico has often been the setting for atomic movies.

- George Romero's *Night of the Living Dead* franchise (1968 present), in which reanimation of the dead is explained through radiation.
- Ishirō Honda's GOJIRA (1954), its U.S. release Godzilla, King of Monsters (1956), and the subsequent franchise, which has amassed more than 30 films. The longest running franchise in movie history, Godzilla has become the embodiment of atomic monster movies. Whether a peaceful underwater creature awoken by atomic testing in the Pacific, or a mutated dinosaur created from radiation in the Marshall Islands (both of which essentially make him an American citizen), the King of Monsters would not exist without his atomic origins.



caption: A birth certificate for Godzilla shows the creature's creation at Bikini Atoll shortly before the Castle Bravo tests in March 1954. Now-retired scientist Glen McDuff found the document among the Lab's other official records many years ago and it is part of the Lab's collections in the National Security Research Center.

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The real to service the reel

Both big-budget and small movies utilized stock footage of nuclear tests from U.S. government news reels and the Lab, which filmed the tests. This footage is part of the collections of the National Security Research Center — the Lab's classified library and curator of unclassified legacy items.

For example, *Killers from Space* (1954), *Bride of the Monster* (1955), and even the 1998 *Godzilla* remake all use footage from either the 1946 Baker test or the 1952 Ivy Mike test. Author and professor Timothy Noël Peacock wryly suggests that Operation Crossroads is perhaps both the most expensive film shoot and the most expensive special effect in cinematic history.



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caption: Watch footage from the Los Alamos <u>Baker test</u> in 1946 (pictured above) as well as <u>Ivy Mike</u>, the first full-scale test of a thermonuclear device, in 1952. Both tests have been featured alongside everything from aliens to mad scientists to radioactive creatures in the atomic movie genre. Test footage and photos are preserved in the National Security Research Center, which is the Lab's classified library.

The significance of these films, however, reaches far beyond plot. They symbolize the convergence of scientific advancement and an aspect of everyday life for everyday people: movies. As vehicles of popular culture inspired by the broader science and technology of the time, post-war atomic psychotronics have secured their place as both a film genre and as representations of "nuclear" and "atomic" in the public vernacular. Today, nearly 80 years after the dawn of the Atomic Age, they are an important aspect of history — and they are still entertaining.

"Some of these are so bad, they're good," said Glen McDuff, a retired Los Alamos weapons scientist, who consults on Legendary Pictures' MonsterVerse franchise, which includes Godzilla, King Kong, Mothra, and others. "Who can't like a giant radioactive-breathing lizard?"

Reflecting on the impact of atomic science in film post-WWII, McDuff explained, "nuclear stuff was a big deal, a big seller" that capitalized on the public's interest in what was happening in Los Alamos and at other national facilities.

Scientific advancement continues

Finally, as Dr. Medford, a character not unlike first Lab director J. Robert Oppenheimer, explains at the end of *Them!*: "When man entered the Atomic Age, he opened the door to a new world. What we may eventually find in that new world, nobody can predict."

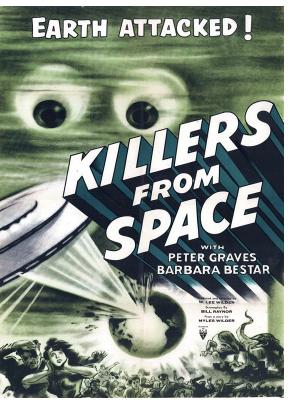
Since then, Dr. Medford's real-life colleagues at Los Alamos have continued to serve at the forefront of scientific advancement. Achievements over the last 80 years include detection of the neutrino (an electrically neutral subatomic particle), development of the world's first <u>supercomputers</u>, pioneering research in biomedical imaging and space exploration, and more.

So, as you sit down this weekend with your popcorn and candy, take another look at some of these horror classics. You may find yourself watching in a new light.

Box:

Want more on the Lab's influence on atomic pop culture? Be on the lookout for two more stories on music and comic books. They also spotlight materials in the collections of the <u>National Security Research</u> <u>Center</u>, the Lab's classified library, which curates unclassified artifacts from LANL's past.







caption: Them! (1954), Killers From Space (1954) and Godzilla, King of Monsters (1956) are three popular atomic-creature features at the heart of nuclear cinema. The Lab and its earliest scientific advancements have been influential in the horror movie genre.

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Examples from the atomic movie genre:

- The Day the Earth Stood Still (1951)
- *Them!* (1954)
- Attack of the Crab Monsters (1957)
- The Beast of Yucca Flats (1961)
- The Andromeda Strain (1970)
- The Fiend with the Atomic Brain (1972)
- The Hills Have Eyes (1977, 2006)
- Night of the Living Dead (1968)
- Godzilla (1998)
- Godzilla (2014)

Sources:

Broderick, M. (1991). *Nuclear movies: A critical analysis and filmography of international feature length films dealing with experimentation, aliens, terrorism, Holocaust and other disaster scenarios,* 1914-1989. McFarland & Company, Inc.

Craig, R. (2009). Ed Wood, mad genius: A critical study of the films. McFarland & Company, Inc. Peacock, T. N. (2021, July 25). From Crossroads to Godzilla: the cinematic legacies of the first postwar nuclear tests. The Conversation.

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